



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,425	10/16/2003	Jeffrey Eldon Fish	KCX-838 (18843)	7967
22827	7590	11/03/2009	EXAMINER	
DORITY & MANNING, P.A. POST OFFICE BOX 1449 GREENVILLE, SC 29602-1449			SASAN, ARADHANA	
			ART UNIT	PAPER NUMBER
			1615	
			MAIL DATE	DELIVERY MODE
			11/03/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Advisory Action Before the Filing of an Appeal Brief	Application No. 10/687,425	Applicant(s) FISH ET AL.	
	Examiner ARADHANA SASAN	Art Unit 1615	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 19 October 2009 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
 b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
 (a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
 (b) ☐ They raise the issue of new matter (see NOTE below);
 (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
 (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
 5. ☐ Applicant's reply has overcome the following rejection(s): _____.
 6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
 7. ☒ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
 The status of the claim(s) is (or will be) as follows:
 Claim(s) allowed: _____.
 Claim(s) objected to: _____.
 Claim(s) rejected: 56-63, 67-76 and 81-88.
 Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
 9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
 10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:
See Continuation Sheet.
 12. ☐ Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). _____.
 13. ☐ Other: _____.

/Aradhana Sasan/
 Examiner, Art Unit 1615

/Robert A. Wax/
 Supervisory Patent Examiner, Art Unit 1615

Continuation of 11. does NOT place the application in condition for allowance because: Applicant's arguments (filed 10/19/09) have been fully considered but are not persuasive.

Rejections under 35 USC 103(a): Applicant argues that "silicate" may not be equated with silica (SiO_2). This is not persuasive because Rohrbaugh teaches that "the inorganic metal oxides used in the composition may be silica - or alumina- based nanoparticles ..." (Page 7, [0061]). Therefore, the limitation of the silica nanoparticles is suggested by Rohrbaugh. Applicant argues that electrical charge may not be equated with Zeta Potential. This is not persuasive because Rohrbaugh teaches the limitations of silica nanoparticles and surface modification by ions including copper ions. The Zeta Potential (first and second Zeta Potential) of the nanoparticles is a property associated with the nanoparticles and is inseparable from the nanoparticles. "Products of identical chemical composition can not have mutually exclusive properties." A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). Please see MPEP 2112.01. Applicant argues that the disclosure of inorganic metal oxides involves completely different elements than the disclosure of natural clays cited as obviating Zeta Potentials. This is not persuasive because one of ordinary skill in the art, after reading Rohrbaugh, would know that silica based nanoparticles can be used in the composition and would find it obvious to use such silica based nanoparticles in compositions like films, textiles, nonwoven fabrics etc. Applicant argues that not all "silica-based" nanoparticles necessarily have a negative Zeta Potential from about -1 to about -50 and that using Applicant's disclosure as a blueprint to reconstruct the claimed invention out of isolated teachings in the prior art is improper under 35 USC 103. This is not persuasive because it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper.

See In re McLaughlin, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). Applicant argues that the Examiner's holding that simply "it would be obvious" to one skilled in the art to utilize nanoparticles and modified nanoparticles with Applicants claimed first and second Zeta Potentials is a merely conclusory statement. This is not persuasive because one of ordinary skill in the art would know that the zeta potential of a particle or nanoparticle is a physical property of the nanoparticle as it is suspended. One of ordinary skill in the art would be able to determine the zeta potential of the silica nanoparticles (as taught by Rohrbaugh) (in a solution or suspension) during the process of routine experimentation. One of ordinary skill in the art would find it obvious to try various nanoparticles in the combination of Morman and Rohrbaugh, such as the nanoparticles taught by Fernandez. The examiner acknowledges that the zeta potential is the electrokinetic potential. However, the zeta potential determination can be carried out by one of ordinary skill in the art and a physical property (such as zeta potential) cannot be separated from the composition itself (i.e., the nanoparticles). Moreover, one of ordinary skill in the art would know that zeta potential can be affected by various factors. According to Reyerson et al. (The electrokinetic potentials of precipitates, J. Phys. Chem., 1947, 51 (1), pp 321-332), barium sulfate particles had a negative zeta potential in water (Page 325), a positive zeta potential in 50% ethanol and the negative potential was increased by adding lithium sulfates (Page 326). Therefore, according to Reyerson, various factors, including electrolytes, solvent, and aging all affect the zeta potential and can change its value from negative to positive. Therefore, the recited first and second zeta potential values would have been obvious to one of ordinary skill in the art. Regarding claim 88, the limitation of coextruding the thermoplastic polymer with the blend of filler and silica nanoparticles would have been obvious over the mixture of polymer and filler that is extruded into a film, as taught by Morman (Page 3, [0024]).